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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,381	09/26/2003	Bharat T. Doshi	Doshi 56-5-21-17-33	8412

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EXAMINER	
CLOUD, JOIYA M	

ART UNIT	PAPER NUMBER
2444	

MAIL DATE	DELIVERY MODE
09/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,381	DOSHI ET AL.	
	Examiner	Art Unit	
	Joiya M. Cloud	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08). Paper No(s)/Mail Date *07/22/2009 and 03/02/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the communication filed 04/28/2009. Claims 1-24 are PENDING. Applicant's arguments have been considered, but are moot in view of new grounds of rejection.

IDS

Examiner acknowledges the IDS submitted 03/02/2009 and 07/22/2009.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Shachar et al.

As per claim 1, Shachar teaches comprising: representing, in a network data structure **(demand vectors)**, information associated with a mesh network having a plurality of nodes interconnected by a plurality of links, wherein the network data structure comprises, for each link

in the network and each node or other link in the network, a representation of a minimum amount of protection bandwidth required **(committed bandwidth)** to be reserved on said each link to restore service upon failure of said each node or other link **(col. 9, lines 60-col. 10, line 6)**; receiving a request for a new service in the network, wherein the new service is represented by a service data structure comprising an identification of each link and transit node in a primary path for the new service **(where the a request for new service is received via the request phase in which nodes transmit their demand vectors representing new service request demands for which a new reservation map is specified, col. 9, lines 20-32)**; determining, using the network and service data structures, whether the new service requires additional protection bandwidth to be reserved on any link in the network **(col. 9, lines 27-40)**; and updating the network data structure if any additional protection bandwidth is determined to be required for the new service **(col. 9, lines 35-59, where a global update takes place in response to a current reservation map indicating additional protection bandwidth is required, see also col. 10, lines 65-col. 11, line 2)**.

As per claim 2, Shachar teaches wherein the service data structure further comprises an identification of bandwidth associated with the new service **(where the demand vectors comprise identification of time slots for bandwidth needed associated with a service requested).**

As per claim 3, Shachar teaches wherein the network is a virtual-circuit mesh data network that transmits packetized data **(col. 10, lines 41-59)**.

As per claims 4 and 5, Shachar wherein the network data structure is distributed over the network such that at least one node in the network does not have all of the information in the

network data structure and wherein each of the nodes in the network has all of the information in the network data structure **(col. 10, lines 41-65)**.

As per claim 6, Shachar teaches a method further comprising, in response to the new service request, determining a restoration path for the new service in the network using the network data structure **(using the demand vectors to create the restoration map, see col. 9, lines 2-14)**.

As per claim 7, Shachar teaches wherein the data structure is an array of vectors **(demand vectors, col. 9, lines 20-32)** wherein each data structure in the array corresponds to a different link in the network; each vector in the array has a plurality of entries corresponding to the nodes and links in the network **(demand vectors, col. 9, lines 20-32)**; for a first data structure corresponding to a first link, each entry in the first vector corresponding to a node or link identifies the minimum amount of protection bandwidth required to be reserved on the first link to restore service upon failure of the node or other link **(col. 9, lines 20-47)**; and the service data structure is a primary path vector having a plurality of entries corresponding to the nodes and links in the network, wherein each entry of the primary path vectors identifies whether the corresponding node or link is part of the primary path for the new service **(col. 9, lines 20-47).**

As per claim 8, Shachar teaches wherein determining whether the new service requires any additional protection bandwidth to be reserved on a link A in the network comprises applying a vector addition operation between the primary path vector corresponding to the new service request and the vector of the array corresponding to the link A to form a result vector, and comparing the maximum value in the result vector with the bandwidth already reserved on

the link A to determine whether any additional protection bandwidth is required for the new service **(Abstract and col. 5, lines 65-67 and col. 7, lines 30-47)**.

As per claim 9, Shachar teaches wherein the additional protection bandwidth is required and is reserved if any result vector entry is greater than the bandwidth already reserved on the link **(col. 9, lines 35-40)**.

As per claim 10, Shachar teaches wherein the vector addition operation is applied between the primary path vector and each vector in the array corresponding to each different link in a restoration path for the new service **(col. 5, lines 65-67 and col. 7, lines 30-47)**.

As per claim 11, Shachar teaches wherein the service data structure is primary path node-link vector V.sub.pnl **(Figure 8)**.

As per claim 12, Shachar teaches wherein an incremental version of the network data structure is used for transmitting sharing information in order to reduce the amount of data that is transmitted in the network to disseminate the information **(col. 5, lines 65-67).**

As per claim 13-15, Shachar teaches wherein transmission control protocol/Internet protocol (TCP/IP) connections are used for the dissemination **(col. 10, lines 41-59)**; wherein the compact representation is a node aggregate vector V.sub.na wherein each element of V.sub.na corresponds to a node in the network wherein the element's value is a function of the maximum of reservation bandwidths reserved on all links incident to the node **(col. 5, lines 56-62 and col. 9, lines 66-col. 10, lines 21)** and wherein the dissemination is accomplished using a link-state routing protocol **(col. 5, lines 56-62).**

As per claim 16, Shachar teaches wherein a compact version of the network data structure is used to reduce the amount of data that needs to be transmitted in the network to disseminate the information about each link **(col. 9, lines 66-col. 10, lines 21)**.

As per claims 17-19, claims 17-19 lists substantially the same elements as claim 1 and is thus rejected using the same rationale.

As per claim 20, claim 20 is substantially the same as claim 12 and thus rejected using similar rationale.

As per claim 21-23, claims 21-23 are substantially the same as claim 7 and therefore rejected using similar rationale.

As per claim 24, Shachar teaches wherein the service data structure is a primary path vector having a plurality of entries corresponding to all the nodes and link in the network wherein each entry of the primary path vector identifies whether the corresponding node or link is or is not part of the primary path for the new service **(Figure 8 and col. 10, lines 51-59).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-3922.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

Art Unit 2444 **August 28, 2009**

/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444